
Working With Layers

6

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Working With Layers

Note:

This condensed version of CADD PRIMER is intended to give you an overview of CADD. It includes only important topics from CADD PRIMER. It does not include any diagrams. CADD PRIMER includes more than 100 diagrams that illustrate the working of CADD. For complete understanding of CADD refer to CADD PRIMER. This complete book is available for download for \$9.95 at <http://www.caddprimer.com> or you can order printed copies through the publisher listed at the end of this chapter.

Key Terms in this Chapter

Term	Description
Composite drawing	A drawing that contains multiple drawings created with the help of CADD layers.
Layer or level	A transparent surface created within a drawing.
Layer color	A color assigned to a layer.
Layer off	Making the drawing objects on a layer invisible.
Layer on	Making the drawing objects on a layer visible.
Layer line type	A line type assigned to a layer.
Locking a layer	Making the drawing objects on a layer permanent and non-editable.
Macro	A recorded set of instructions that can be used to repeat a task.

The Concept of Layers in CADD

Layers are imaginary transparent surfaces that can be created within a CADD drawing. You can draw on these imaginary surfaces and group drawing objects on different layers (Fig. 6.1 available in CADD PRIMER). This helps to organize CADD drawings and makes editing much easier. You can turn the layers on or off to view or edit specific objects. When you turn a layer off, the objects on that layer disappear from the screen; when you turn it back on, they are displayed. Using layers enables you to control the display of specific information on the screen by turning a combination of layers on or off.

You may create dozens of layers in a drawing to segregate drawing objects. You may create separate layers to show dimensions, hatch patterns and for any drawing objects that are different in nature. This provides a great convenience in editing drawings. When drawings are complex and a number of drawing objects are overlapping, you can turn off the unwanted layers. This makes it much easier to select the desired objects for editing. When you are finished editing, you can turn the layers back on.

Layers are commonly used in professional architecture and engineering drawings. Architects and engineers often need to coordinate different engineering services in a plan. They can illustrate different engineering services on the same drawing using different layers. This helps them understand how one engineering service relates to another.

Creating Layers for an Engineer's Office

Fig. 6.1 illustrates how you can organize an engineer's office diagram in several layers. You can place walls and partitions on one layer, furniture and equipment on another, and so on for text, symbols, and construction lines, etc. You can also create a separate layer to show the ceiling and lighting plan, floor finish plan, or any other drawing objects that you want to include in the drawing.

Fig. 6.2 (available in CADD PRIMER) shows how you can display a furniture plan and a reflected ceiling plan from this multi-layered drawing. When you need to display the furniture layout as shown in illustration A, you can turn on the wall and furniture layers, and turn off the rest. When you need to display the ceiling and lighting plan (Diagram B), you can turn on only the ceiling and the wall layers. You can turn the relevant text and symbol layers on and off as required.

Note:

Layers are given specific characteristics that distinguish them from each other. Each layer has a specific color and line type. Whatever you draw on a layer is drawn with that color and line type. This color coding helps to identify which drawing objects are placed on which layer.

The Tools to Work with Layers

CADD provides a number of tools that allow you to work efficiently with layers. Most programs use a layer control window that allows you to manage all aspects of working with layers.

The following are the basic tools for working with layers. These topics are described in detail in CADD PRIMER.

Creating New Layers

Setting a Layer Current

Changing Color and Line Type of Layers

Turning Layers On or Off

Locking and Unlocking Layers

Are Layers Absolutely Necessary?

Layers are not absolutely necessary, however they provide a convenient way to manage information in CADD drawings. For example, in the engineer's office example, without the help of this function you may have to create separate drawings to show the furniture plan, lighting plan, etc. With the help of layers, you can create just one composite drawing. The composite drawing can contain all the plans. It makes it easier to correlate information from one plan to another.

(See CADD PRIMER for important tips)

AutoCAD, MicroStation and Cadkey Terms

This topic lists important terms used in leading CADD programs. Refer to CADD PRIMER for details.

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